FACT SHEET FOR PERMIT NO. ST 6168

LANDA, Inc.

Permit Type:
State Waste Discharge Permit

Permit Number:
ST 6168

Permittee:
LANDA, Inc.
4275 Northwest Pacific Rim Boulevard
Camas, WA 98607

Facility:
LANDA, Inc.
4275 Northwest Pacific Rim Boulevard
Camas, WA 98607

Permitting Authority:
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

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SUMMARY - TENTATIVE DECISION

The permitting authority has made a tentative decision to issue a permit, effective through June 30, 2003, to LANDA, Inc., for the discharge from its production activities to the City of Camas sanitary sewer system. The tentative decision to issue the permit is based on a determination that the discharge would not interfere with the treatment process or otherwise be incompatible with the sewage works or result in pass-through of pollutants such that the city's National Pollutant Discharge Elimination System (NPDES) permit would be violated.

The purpose of this fact sheet is to present the facts and reasoning on the basis of which the tentative decision was made. (The draft permit should accompany this fact sheet.)

PUBLIC INVOLVEMENT OPPORTUNITY

Interested persons are invited to comment on this tentative decision. Comments on the draft permit will be received for 30 days following the day of publication of the notice in the local newspaper, *The Columbian*. (The target date for publication is March 22, 1999.)

All written comments submitted during the comment period will be retained by the permitting authority and considered in making the final decision on the application for a permit. The permitting authority will provide copies of the application, the tentative decision, and the fact sheet on request. Persons who submit written comments will be notified of the final decision.

The applicant or anyone affected by or interested in the tentative decision may request a public hearing. The request must be filed within the 30-day comment period, and must indicate the interest of the party filing such a request and the reasons why a hearing is warranted. The permitting authority will hold a public hearing if it determines there is sufficient public interest.

Please submit written comments to the permitting authority at the address shown on the cover page of this fact sheet, to the attention of Industrial Permit Coordinator.

BACKGROUND INFORMATION

GENERAL DESCRIPTION OF THE ACTIVITY

LANDA, incorporated in 1969, builds pressure washing equipment, automatic parts washers, evaporators, and wastewater treatment/recycle systems. The company produces a wide range of types and sizes of these products and markets them around the world. Normal production time currently is 16 hours per day, five days per week. The business has recently moved from Portland, Oregon, to Camas, Washington.

Raw materials:

The raw materials used in the manufacturing processes are pre-formed metal tubing, pipe, sheet and plate and surface coating materials. Metals utilized are steel, stainless steel, and aluminum. Surface coatings are the powder type, which are applied using electrostatic charge and are baked on. (Much of the end product is made up of finished products manufactured by others.)

Processes:

The manufacturing processes are cutting, forming, welding, cleaning, surface-coating, assembly, and product testing. To a large extent, components (pumps, motors, filters, tanks, plumbing, and controls) of the end products are procured from other manufacturers, often off-the-shelf items made for other specific or general purposes. These components are arranged and assembled, along with some components made by LANDA, into the various products which LANDA has designed to perform the special functions already mentioned.

Products:

The products are industrial cleaning systems, including pressure washing equipment, automatic parts washers, wastewater treatment/recycle systems, and evaporators.

Wastes and Byproducts:

Scrap metals are produced; these are salvaged and recycled. Used oil (from machinery) and waste oil (retrieved from wastewater) are also accumulated in the manufacturing process. (Oil is used as a lubricant in some of these processes and adheres to the parts.)

A water-based cleaning process is used to prepare parts for surface coating (no volatile organic solvents are used). There is some wastewater discharge from this recycle process, and there are accumulated residuals (which are disposed of as solid or hazardous wastes). There is also a wastewater discharge from product testing and one from the charging of ion exchange media used in some water treatment products.

POTENTIAL SOURCES OF POLLUTANT DISCHARGES TO POTW

Parts Washing:

Water containing a cleaning agent is continuously reused in the parts washing process and evaporated when it is no longer effective, leaving no liquid discharge. Rinse water is also continuously reused, but

carry-over of the cleaning agent (Chemcoa 1022, containing phosphoric acid) from the washing unit to the rinsing unit necessitates the constant bleed-off (and replenishment with clean water) of about five gallons per minute to maintain adequate rinse water quality. This "blow-down," which occurs for eight to ten hours per day, is the only discharge from the parts washing process. Occasionally, the two rinse tanks, like the wash tank must be drained and cleaned (quarterly or semi-annually). When this happens, the contents are not discharged, but evaporated, with the residue properly disposed of as a solid waste, according to its designation.

Equipment Testing:

The major contribution to the quantity of the industries wastewater discharged to the publicly owned treatment works (POTW) (an estimated average 20,000 gallons per production day) is from product testing. This water (from the public supply) is exposed only to the internal surfaces of the components of the product being tested. A small amount of methanol is added to some of the products after testing to assure that any residual test water will not freeze and damage the product. The excess is blown back out of the product and some of this methanol enters the product testing wastewater stream. Also, because some of the equipment heats water, this test water also contains heat as an added pollutant.

Charging Ion Exchange Resin:

LANDA is expanding into water treatment products which include the ion exchange unit process. The ion exchange resin must be charged, which requires the passing of a concentrated sodium chloride solution through it. It is estimated that 300 to 900 pounds per month of salt will be used and discharged in the total flow of 260,000 to 476,000 gallons per month.

PERMIT HISTORY AND STATUS

LANDA, Inc., was issued a City of Portland, Oregon, pretreatment program permit to discharge from its manufacturing activity at its former site. The permit was effective from November 15, 1992, to December 15, 1996. Application for a new permit from the state of Washington was received December 22, 1997. The receiving sewerage system authority must approve the discharge before a permit decision can be made. Notification of this approval was provided to the permitting authority on July 15, 1998.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

There were no violations of any permit limits reported during the term of the previous permit issued by the city of Portland, Oregon.

WASTEWATER CHARACTERIZATION

Table 1 is a summary of effluent monitoring results reported by the permittee over the four-year period from January 1994, through December 1997. The previous City of Portland permit limitations are also shown for comparison.

TABLE 1 - DISCHARGE DATA (mg/L except pH)

Analyte / Property	Categorical Limits (daily/monthly)	Measured Range	No. of Measurements
Biochemical Oxygen Demand	na	40	1
Cadmium	.11/.07	<.001 - .022	29
Chromium	2.77/1.71	<0.003 - .04	29
Chemical Oxygen Demand	na	92	1
Copper	3.38/2.07	<.02 - .052	29
Cyanide (total)	1.20/.65	<.01 - .027	24
Di-n-butyl phthalate	na	.32	1
Fluoride	na	<1 - 1.7	4
Freon extractable	na	4 - 26	4
Lead	.69/.43	<.02 - .025	20
Methylene chloride	na	.09	1
Molybdenum	na	.034 - 1.93	9
Nickel	3.98/2.38	<.01 - .019	20
Oil & Grease	100	5 - 18	4
pH Range	na	5.5 - 11.4	46
Selenium	na	<.02 - .063	1
Silver	.43/.24	<.0005 - .0006	18
Solids (total)	na	145	1
Solids (susp.)	na	24	1
Sulfate	na	<5 - 23	6
Total Toxic Organics	2.13	.09 - .39	3
Volatile Organic Compounds	na	.0005 - .09	3
Zinc	2.61/1.48	<.02 - .355	22

POLLUTION CONTROL MEASURES

Prevention:

All manufacturing is carried out inside and under roof. A high recycle-rate parts washing system is used to minimize wastewater discharges. When the recycled wash and rinse waters reach exhaustion in terms of effectiveness, the water is evaporated, rather than discharged, leaving a solid waste residue.

The product testing wastewater, which averages about 20,000 gallons per day, is being discharged without any pretreatment to the POTW. It is not currently reused because it would have to be cooled, which is not cost-effective at this time. This wastewater is being discharged without a permit under the assumption that a permit is not required. (No permit was required by the city of Portland at the former location for the discharge of the product testing wastewater.)

Wastewater Treatment:

Oil/water separation and automatic pH control (with sodium hydroxide injection) are on-site treatment measures applied to the wastewater discharge from the parts washing operation prior to discharge to the POTW. There are no treatment measures applied to the testing wastewater prior to discharge.

APPLICABLE STATE AND FEDERAL REQUIREMENTS

State law [Revised Code of Washington (RCW) 90.48.160] requires any person who conducts a commercial or industrial operation of any type which results in the disposal of solid or liquid waste material into waters of the state, including commercial or industrial operators discharging solid or liquid waste material into sewerage systems operated by municipalities or public entities which discharge into public waters to procure a permit before disposing of such material. (This requirement does not apply to persons discharging only domestic sewage into a public sanitary sewerage system. There is also an exception for industrial discharges which are similar to sewage.) On application for a waste discharge permit, the Department of Ecology must issue a permit unless it finds that the discharge of the waste material as proposed in the application will pollute the waters of the state in violation of the public policy declared in RCW 90.48.110.

Federal regulations (40 CFR Part 403) establish responsibilities of government, industry and the public to implement national pretreatment standards to control pollutants which pass through or interfere with treatment processes in publicly owned treatment works or which may contaminate sewage sludge. These objectives are accomplished by certain general and specific discharge prohibitions which must be implemented as national pretreatment standards. These regulations apply to: *pollutants* from non-domestic sources covered by pretreatment standards, *POTW's* which receive wastewater from sources subject to national pretreatment standards, *sources* subject to pretreatment standards, and *states* which have a NPDES program.

Under federal regulations, publicly owned treatment works which are required to develop a pretreatment program (essentially those with capacities of five MGD or more and with one or more "significant industrial users") must establish and enforce specific limits to implement the discharge prohibitions. For "significant" users, individual control mechanisms (permits) are required. States with delegated NPDES permitting programs *and* an approved pretreatment program of their own may assume responsibility for implementing the POTW pretreatment program requirements.

For some specific industry categories, pretreatment standards have been set by EPA in federal regulations. These specific standards are intended to implement the discharge prohibitions and to assure there will be no pass-through, interference, or other incompatibility with the sewage works caused by the discharges from these particular industries. When they are applicable, they must be set as effluent limits in permits.

PERMIT DECISION

DECISION AND BASIS

The permitting authority has determined that the activity described in the permit application falls within one of the industry categories for which federal pretreatment standards have been developed (Metal Finishing: 40 CFR Part 433). It is therefore, by definition, a "significant industrial user" and, as such, must have an "individual control mechanism" (permit). Though the City of Camas POTW has a design flow of 7.0-MGD (maximum monthly average), the POTW does not have an approved pretreatment program of its own. The state of Washington has an Environmental Protection Agency (EPA) delegated NPDES program and its own EPA-approved pretreatment program. The state has exercised its option to assume responsibility for implementing the POTW Pretreatment Requirements set forth in 403.8(f) in lieu of requiring the POTW to develop a pretreatment program. The state must therefore issue a permit under the authority and obligation given it by RCW 90.48.160 and .180. The bases for the conditions of the draft permit follow.

BASIS FOR SPECIFIED DISCHARGE LIMITATIONS (S1)

The federally promulgated pretreatment standards are imposed in this draft discharge permit. These include the general and specific discharge prohibitions (40 CFR 403.5) as well as the specific pretreatment standards which have been determined to be applicable to this industry (40 CFR 433.17). These pretreatment standards have been specifically developed by EPA to assure that the wastewater discharge from this particular industry category to a POTW will not cause or contribute to violation of the receiving POTW permit limits.

The basis for imposing the federally promulgated pretreatment standards are the requirements of the federal regulations 40 CFR 403.5. These are implemented through the authority of the state NPDES and pretreatment programs as delegated and approved by the EPA. Specific authority to establish these permit conditions is given by the state regulation Washington Administrative Code (WAC) 173-216-110.

Salt in the wastewater from the ion exchange resin charging operation is an additional pollutant which would not have been accounted for in the categorical standards. Based on the rate of utilization and the total flow volume, with which it would be discharged, the predicted maximum daily average concentration is calculated as follows:

Mininum flow = 260,000 gallons / month
Maximum salt = 900 pounds
Average concentration = 900 lb. x 454,000 mg/lb x 1 / 260,000 gal x 1 gal/3.785 L = 415 mg/L

This salinity concentration is nowhere near that which would adversely impact the biological process at the POTW, and in fact, is lower than the drinking water standard (500 mg/L). The permitting authority has determined there is no basis to place limits or monitoring requirements for metal salts in the permit.

Heat added to the wastewater discharge from the equipment testing is undetermined. However, it is impossible that the temperature of the mixed hot and cold water discharges at the plant, mixed further with other sewage discharges in the city sewer system on the way to the treatment plant, could cause the whole influent to the plant to exceed the federal pretreatment standard of 104 degrees Fahrenheit. Therefore, the permitting authority has determined there is no basis for limits or monitoring requirements for discharge temperature.

Methanol lost to the wastewater discharge in the testing-packaging process is reported to be in the range of 30 - 40 gallons per day. Mixed with the minimum facility production discharge (260,000 gallons per day) the concentration would be in the range of 100 mg/L, and mixed with the total sewage flow to the treatment plant, in the range of one mg/L.

Methanol in this concentration is not toxic and in fact is easily synthesized by bacteria. The permitting authority has determined that there is no basis for limiting or monitoring methanol in the discharge.

BASIS FOR SPECIFIED MONITORING, REPORTING AND RECORD-KEEPING REQUIREMENTS (S2, S3, and S4)

The basis for the monitoring, reporting, and record-keeping conditions in the draft permit are the requirements of the federal regulations 40 CFR 403.12(e), (f), (g), and (o). These are implemented through the obligation and authority given by the state regulation WAC 173-216-110(1)(g).

BASIS FOR OPTIONAL SOLVENT MANAGEMENT PLAN AND CERTIFICATION (S5)

The basis for this optional condition are the provisions set forth at 40 CFR 433.12 of the federal pretreatment regulations, which allow this option in lieu of monitoring total toxic organics (TTO).

BASIS FOR SPILL PREVENTION REQUIREMENTS (S6)

The basis for this condition is the department's authority "to specify conditions to prevent and control pollutant discharges from plant site runoff, spillage or leaks…" [WAC 173-216-110(1)(f)].

BASIS FOR THE GENERAL CONDITIONS

The General Conditions are standard conditions which are applicable to all state waste discharge permits according to the WAC. These permit requirements are, for the most part, contained in WAC 173-220-150. Others stem from WAC 173-220, Sections 110, 120, 180, 190, and 200.

(Note: Since treatment is not required to comply with the limitations and prohibitions of this permit, the federal pretreatment program provisions for treatment bypasses and upsets, and the state permit condition requiring proper operation and maintenance of treatment facilities have not been included in this draft permit.)